Introduction: This study aimed to delineate the current surgical practice in the community, and to assess the appetite for teaching surgical trainees in the primary care setting.
Methods: Delegates at the Association of Surgery in Primary Care (ASPC) Conference were asked to complete a survey. The ASPC comprises General Practitioners with a Specialist Interest (GPwSI) in Surgery. There were no consultant surgeons subcontracted to primary care in the cohort.
Results: 62% of delegates completed the questionnaire, having performed a mean of 40.1 procedures/month (range 8-150). The most commonly performed procedures were vasectomy and minor skin surgery (MSS). 98% of respondents regularly performed vasectomy, and 40% performed MSS; 60% felt competent to teach these. While 78% (or 76%) felt competent to train Foundation (or Core) Trainees, only 51% (or 35%) felt competent to train ST3-4 (or ST5-8) surgical trainees (p=0.0012). Three quarters of respondents would commit ≥25% of their lists to training. 35% of respondents had MRCS/FRCS, while 29% had no formal surgical qualifications.
Conclusions: For surgical training to take place in the community, the procedures performed in the community should be integrated into the ISCP, and training in primary care should be regulated. Neither of these currently takes place.

0671: ARE WE MAXIMISING LEARNING FROM REPORTED SURGICAL PATIENT SAFETY INCIDENTS? AN ASSESSMENT OF HOW ACCURATELY THE NATIONAL REPORTING AND LEARNING SYSTEM CLASSIFIES SURGICAL ERROR

Ishani Barai [*,1], Ann-Marie Howell [2], Elaine Burns [2], Ara Darzi [2]. [1] *Imperial College London, London, UK;* [2] *Department of Surgery and Cancer, Imperial College London, London, UK.*

Introduction: Surgical safety incident reports are complex. Reports are categorised by the National Reporting and Learning System(NRLS) and used for analysis of types of hospital harm. We hypothesize that these categories inaccurately represent reported surgical error. This study assessed the ability of the NRLS classification system to accurately categorise surgical harm.
Methods: A random sample of surgical incident reports was interrogated. Categories selected were examined and compared to the free-text description of the incident for accuracy and precision. A two-person independent assessment method was employed and data was extracted using a standardized form.
Results: 703 surgical reports were assessed for accuracy of incident type. On analysis of the free text data, 3.1%(22/703) of incidents were classified incorrectly. There was an alternative possible incident classification option in more than two thirds of cases (69.0% [485/703]) and in 9.5% [67/703] of cases there were three or more appropriate alternate classifiers. Kappa statistic was 0.917 (error alpha 0.82,p=0.0001).
Conclusions: The classification process does not reflect the clinical interpretation of the incident. The lack of relevance of the classification limits the learning that can be derived from reported harm. Analysis of the free text may allow better discrimination and enhance learning from surgical incidents.

0704: ATTRITION IN SPECIALTY TRAINING: WHAT CAUSES SURGICAL SPECIALTY TRAINEES TO LEAVE?

Thomas Hampton [*,1], Robert Greenhalgh [1], Amin Elmubarak [2], Prodip Das [1]. [1] *Royal Sussex County Hospital, Brighton, UK;* [2] *Medical University Pleven, Pleven, Bulgaria.*

Introduction: We question the impacts of recent changes to training on trainee satisfaction and attrition. Do existing pathways support current higher surgical trainee's ongoing development? Do any surgical sub-specialities provide training that better supports trainees?
Methods: Last year we contacted each of the higher surgical training deaneries across England under the Freedom of Information Act to acquire trainee data including rates of prematurely leaving programmes (2008-2012).
Results: Of 14 contacted deaneries, 9 provided complete data, registering 273 trainees who left training posts. The highest attrition rate was London, with 2.7% of trainees. Wessex had lowest dropout rates with 0.41% Both London and West-Midlands had 10+ trainees leave aged over 40yrs. Cardiothoracic dropout rate was highest at 3%. Paediatric surgery recorded no dropouts. In Oxford and Mersey deaneries over 75% of leavers were female but in London only 22% were female.
Conclusions: Our study suggests location, sex, age and specialty all impact the likelihood of completing higher surgical training. Variation across the country implies either discrepancies in training received or in the perception of that training/support. Further data acquisition is needed to assess whether trainee satisfaction correlated with these demographics and potentially identify targets for provision of increased support/development for the surgeons of the future.

0749: SURGICAL SKILL VIDEO RESOURCES FOR WORKSHOP USE AND ONLINE ACCESS BY MEDICAL STUDENTS

Joshua Burke [*,1], Rachael Morley [1], Peter Coe [2]. [1] *University of Manchester, Manchester, UK;* [2] *Department of Surgery, The Christie NHS Foundation Trust, Manchester, UK.*

Introduction: Long-term surgical skill acquisition requires repetition but online resources demonstrating skills often incur a fee. We aimed to produce video resources, for use in skills workshops run by the undergraduate surgical society 'Scalpel' and for online access with evaluation.
Methods: Surgical techniques were demonstrated in 3 videos. Video efficacy was evaluated through a questionnaire. A scale from 1 to 7, with 7 being strongly agree and 1 being strongly disagree, was used.
Results: One-handed reef knot tying; instrument tying; tying at depth videos were uploaded to the Scalpel surgical society website for open access. Ease of following the video, understanding instructions and appropriate video pace, were investigated with median scores of 6.5, 6.5 and 7 respectively (n=29). Most attendees intended on accessing the video resource post-course (median score 6.5, (4-7)) but a wider range of responses to future plans to maintain new skills (median score 6, (1-7)) was seen.
Conclusions: Video resources can be made for medical students to teach surgical skills at no cost to an undergraduate society. These allow students to maintain and refresh skills at their convenience. In a self-selected group attending an undergraduate surgical conference, good motivation and adequate opportunity to maintain skills was seen.

0753: ETHICS COMMITTEE APPROVAL IN SURGICAL INNOVATION IN COLORECTAL SURGERY

Kimberley Doolan [*], Barry Paraskeva. *Academic Surgical Unit, Imperial College NHS Healthcare Trust, London, UK.*

Introduction: Surgical innovation research is often deemed less ethically rigorous than that of the medical world. Identifying where variation in surgical method becomes a new technique is troublesome, and often bypasses clinical ethics boards. This review aims to establish the involvement of ethics committees, or similar independent third parties, in published surgical innovation in colorectal surgery in 2013.
Methods: A PubMed search identified titles containing "new", "novel" or "innovative", and either "colorectal", "colon" or "rectal" and "surgery", published between 01/01/2013 and 01/01/2014. The subsequent results were then reviewed for suitability for inclusion into this review. Exclusion criteria included non-surgical therapies, diagnostics, animal or cadaveric models, non-English language and comparative studies or literature reviews.
Results: Using the above criterion, 29 papers were identified as describing innovative surgical techniques in colorectal surgery; of these only 41% mentioned independent committee approval prior to intervention.
Conclusions: This low rate of formal ethics board involvement in trialling new techniques must be improved for surgical innovation to stand up for rigorous review against non-surgical techniques. A procedure deemed to have varied sufficiently from the accepted norm to be worthy of publication must seek ethical approval. Achieving this requires a change in approach to surgical innovation.

0757: CONSULTANT-SUPERVISED, CORE SURGICAL TRAINEE-LED THEATRE LISTS – SUCCESSFULLY MAXIMISING LEARNING OPPORTUNITIES IN THE TIME AVAILABLE

Laura Derbyshire [*], Aqsa Siddiqui, Moez Zeiton, James Pollard, David Jones. *University Hospital of South Manchester, Manchester, Cheshire, UK.*

Introduction: Better Training Better Care (BTBC) pilots are a Health Education England (HEE) initiative to maximise junior doctor learning in the

time available. We report a 12-month pilot (August-July 2013) aimed to improve surgical training through dedicated and supervised Core Surgical Trainee (CST) lists.

Methods: Appropriate operating lists were ring-fenced. CSTs led these from pre to post-operative care. Supervising Consultants were always present, either scrubbed (STS) or unscrubbed (STU). The amount of supervised training (STS or STU) in the pilot was compared to the previous year using logbooks (with consent). Statistical analysis was performed (Chi-squared). Educational value was evaluated using mini-surgical theatre educational environment measure (mini-STEEM).

Results: During the 12-month pilot, eight CSTs in General Surgery completed 734 cases, 242 (33%) being supervised training. The previous year, 803 cases were completed, 163 (20%) being supervised. This is a significant increase in number and proportion of supervised training cases delivered (31.7, p <0.01). Significant increases were also seen in Plastics, Breast and Orthopaedics. Overall mini-STEEM score of 38 (>2 standard deviations above midpoint of 27), demonstrated a 'strongly positive educational experience'.

Conclusions: Amount, proportion and experience of surgical training was improved by this BTBC pilot, through dedicated and supervised CST lists.

0789: STUDENT-RUN BASIC SURGICAL SKILLS – AN EFFECTIVE INTERVENTION TO PROMOTE STUDENT CONFIDENCE AND INTRODUCE POSITIVE SURGICAL ROLE MODELS

Hannah Charlotte Copley *, Elana Osen, Sirke Lysette Rinkoff, Margaret Ma Huang. *University of Cambridge School of Clinical Medicine, Addenbrooke's Hospital, Cambridge, UK.*

Introduction: Interest in surgical careers is in worldwide decline. Negative surgical role models was a frequently cited disincentive in a UK medical school-based survey. This study aims to assess whether early exposure to safe surgical practice in a controlled workshop environment introduces positive role models and improves student's confidence and proficiency in key skills.

Methods: Medical students were offered a student-run Basic Surgical Skills (BSS) course. A 20 question pre- and post-course survey assessed self-reported confidence and competence in key skill areas using Likert scales. Pre- and post-responses were paired and anonymised pre-analysis.

Results: 40/40 and 39/40 completed the pre- and post-questionnaire respectively. The non-attender was excluded leaving paired responses N=39 for analysis. Data was non-parametric and compared in SPSS with the Wilcoxon signed-rank test. 19/20 questions demonstrated statistically significantly higher rated values (P<0.05) following the course. Notably these included "I have met good surgical role models" as well as within all five skills taught. A non-significant increased reporting of interest in a surgical career was the only non-positive finding (p=0.08).

Conclusions: A student-run BSS course was effective at introducing positive role models and producing consistent and demonstrable improvements in self-reported confidence and proficiency in key surgical skills.

0797: DEVELOPMENT AND CONTENT VALIDATION OF A URETEROSCOPY CURRICULUM

Oliver Brunckhorst *[,1], Johar Raza Syed [2], Muhammad Shamim Khan [1], Prokar Dasgupta [1], Kamran Ahmed [1]. [1] *MRC Centre for Transplantation, King's College London, King's Health Partners, Department of Urology, London, UK;* [2] *Roswell Park Cancer Institute, Buffalo, New York, USA.*

Introduction: Current validation evidence for ureteroscopy training modalities allows them to be integrated into a formalised curriculum. Our aim was therefore to develop and content validate a curriculum incorporating key technical and non-technical skills.

Methods: Three modalities of training were incorporated into the curriculum including: (1) the UroMentor virtual reality simulator, (2) Uro-Scopic bench-top model and; (3) distributed simulation with "The Igloo", a portable inflatable high-fidelity training environment. Curriculum development was via literature review of key operational steps for ureteroscopy alongside the available tasks on the URO mentor. Experts from 2 countries (UK and America) and across 3 separate institutions were consulted for content validation.

Results: 100% of respondents agreed that integration of non-technical skills via the distributed simulator was useful. 83% agreed the content of the tasks laid out would be sufficient to effectively train novices for ureteroscopies. 3 tasks were added and 2 removed following consultation. The developed curriculum was divided into four modules: 1. Knowledge. 2. Technical Skills. 3. Integration. 4. Non-technical skills.

Conclusions: The developed curriculum offers integration of key technical and non-technical skills required in ureteroscopy via utilisation of various training modalities. However, the curriculum requires further validation to establish face validity and educational impact.

0798: LIVE SURGICAL BROADCASTING AS A TRAINING TOOL: IS IT SAFE FOR PATIENTS?

Oliver Brunckhorst *, Benjamin Challacombe, Hamid Abboudi, Muhammad Shamim Khan, Prokar Dasgupta, Kamran Ahmed. *MRC Centre for Transplantation, King's College London, King's Health Partners, Department of Urology, London, UK.*

Introduction: Live surgery is common at surgical conferences. We aim to: (1) explore evidence for live surgery as a training tool, (2) identify evidence for its safety, (3) identify guidelines provided for live surgical procedures and (4) provide a framework for development and implementation of guidelines.

Methods: A search was performed using PubMed, EMBASE and the Cochrane Library. Additionally, societies for eleven surgical specialties were searched for guidelines on live procedures.

Results: Studies analysing the educational value have demonstrated feasibility, acceptability, construct and concurrent validity of live surgery. Live procedures do not affect complication rates (p<0.05), however, success rates were lower in some articles (6.6 - 17% lower in live cases). Currently, only urology, cardiothoracic and vascular societies offer any guidelines on live surgery.

Conclusions: Little evidence exists on the educational value and safety of live surgery. With only three specialties offering any guidance, more needs to be done to provide these; ensuring patient safety is not compromised. A 6-step framework is proposed for development of guidelines, which should be overseen by an independent body: 1. Identification of Hazards in Live surgery. 2. Development of Guidelines. 3. Validation of Guidelines. 4. Implementation. 5. Regulation. 6. Audit Effect on Patient Outcomes.

0799: EPOSTERS AS AN AID TO TEACHING SURGICAL FINAL YEAR MEDICAL STUDENTS

Ben Rees, Jessika Voll *, Charles Maxwell Armstrong. *Nottingham University Hospitals, Nottingham, UK.*

Introduction: To use ePosters as an innovate method to teach Surgery to Final Year Medical Students.

Methods: Eighteen Final Year Medical Students were tasked with giving a five minute ePoster presentation to their peers at the end of their surgical attachment. Students had to learn a topic based on a case that they had themselves researched and then present this succinctly. A strict five-minute time slot was allowed for each presenter, with a further minute for questions from the audience. The students prepared a single slide as a visual ePoster to aid their presentation. Students were scored by three teaching fellows present.

Results: Scores were variable as expected. However the diversity both in selection of surgical cases and the style and delivery of eposters proved informative to both students and teaching fellows alike. The top three posters were illuminating enough to be selected for display within the learning environment.

Conclusions: Students demonstrated learning across visual, auditory and in one case kinesthetic domains in this innovative educational session. Students also learnt presenting skills essential for their future careers. Feedback was excellent. The success of the project has afforded opportunity for inclusion in other areas of medical student teaching.

0848: DOES GENDER PLAY A SIGNIFICANT ROLE IN SURGICAL TRAINEES' STRESS LEVELS?

Tammy Lo *, Elizabeth Sharp, Humphrey Scott. *Kent, Surrey and Sussex Local Education Provider, London, UK.*

Introduction: Competitive training opportunities due to European Working Time Directive pose an important challenge for surgical trainees, leading to stress affecting work performance. We reviewed the domains of trainee gender and their opinions on career related stress.